

High-quality partially coherent Bessel beam array generation: erratum

CHUNHAO LIANG,^{1,3,4} XINLEI ZHU,¹ CHENKUN MI,¹ XIAOFENG PENG,¹ FEI WANG,^{1,5} YANGJIAN CAI,^{1,2,6} AND SERGEY A. PONOMARENKO^{3,7}

¹College of Physics, Optoelectrics and Energy & Collaborative Innovation Center of Suzhou Nano Science and Technology, Soochow University, Suzhou 215006, China

²Center of Light Manipulations and Applications, College of Physics and Electronics, Shandong Normal University, Jinan 250014, China

³Department of Electrical and Computer Engineering, Dalhousie University, Halifax, Nova Scotia B3J2X4, Canada

⁴e-mail: cliang@dal.ca

⁵e-mail: fwang@suda.edu.cn

⁶e-mail: yangjiancai@suda.edu.cn

⁷e-mail: serpo@dal.ca

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In this erratum, we correct mistakes in Eqs. (6), (8), and (9), typo in Eq. (11), as well as lattice period magnitudes and units in Fig. 1. We also update the funding information in Opt. Lett. 43, 3188 (2018). ©2018 Optical Society of America

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Equations (6) and (8) in Ref. [1] should read

$$I(\mathbf{s}) \propto \frac{1}{M} \sum_{n=1}^M |\tilde{\tau}(k\mathbf{s}_{\perp} + \mathbf{V}_{0n})|^2, \quad (1)$$

and

$$I(\mathbf{s}) \propto \sum_{n=1}^M J_l^2(R|k\mathbf{s}_{\perp} + \mathbf{V}_{0n}|). \quad (2)$$

The error affected lattice period magnitudes and units in Fig. 1 which we corrected. The revised Fig. 1 is reproduced here.

Next, as the units of \mathbf{v} and \mathbf{V}_{0n} are inverse meters, Eq. (9) should read

$$p(\mathbf{u}) = \frac{1}{M} \sum_{n=1}^M \exp[-(\mathbf{u} - \mathbf{U}_{0n})^2 / 2w_s^2], \quad (3)$$

where \mathbf{u} is a 2D position vector in the rotating ground-glass disk surface and \mathbf{U}_{0n} is an off-axis displacement, both are measured in meters to adequately describe the experimental situation.

In addition, Eq. (11) contains a typo; the correct Eq. (11) should read

$$\tilde{\tau}(\mathbf{r}) \propto \int \tau(\rho) \exp(-ik\mathbf{r} \cdot \rho / f_2) d^2\rho. \quad (4)$$

Here \mathbf{r} is a transverse position vector in the beam profile analyzer plane. We stress that all experimental results and the corresponding simulations were performed using the correct

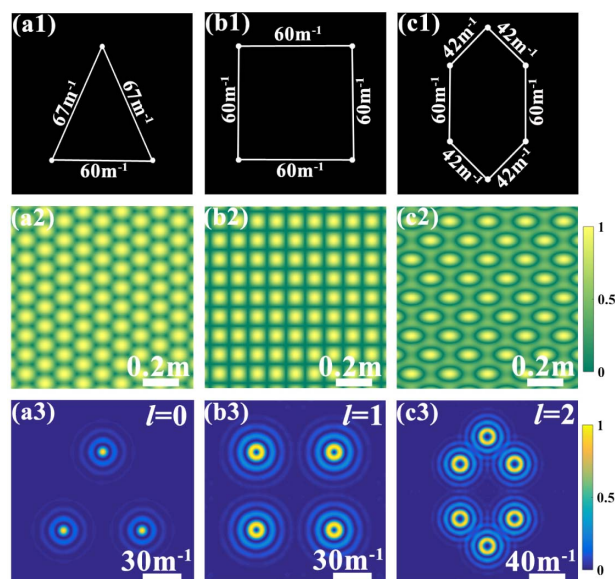


Fig. 1. (a1)–(c1) OCL distributions p with triangle, square, and hexagon patterns, respectively; (a2)–(c2) modulus of the source degree of coherence $|\mu|$ of the corresponding OCLs. (a3)–(c3) radiant intensity distributions of the generated quasi-BBAs with different beam orders. The radiant intensity distributions are normalized by the peak intensity.

Fourier definition and hence are unaffected by the typo. We also stress that the above mistakes do not invalidate any of the findings of our original work [1].

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